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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/576,258

04/18/2006

Akinori Masamura

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OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

TIETJEN, MARINA ANNETTE

ART UNIT

PAPER NUMBER

4177

MAIL DATE

DELIVERY MODE

06/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/576,258 | Applicant(s) MASAMURA ET AL. | |
| | Examiner MARINA TIETJEN | Art Unit 4177 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/18/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

This office action is responsive to the preliminary amendment filed on 04/18/2006. As directed by the amendment: claims 1 and 4 have been amended and new claims 5 and 6 have been added. Thus, claims 1-6 are presently pending in this application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 4-6 recite the limitation "the valve body part" in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claim. It was assumed "the valve body part" should have read "the main body" for the purpose of examination.

Claim Objections

1. Claims objected to because of the following informalities:

Claim 5, the limitation "the fluid-pressure-receiving area" is lacking antecedent basis, and it appears that claim 4 should depend on claim 4 instead of claim 2.

Claim 6, the limitation "the fluid-pressure-receiving area" is lacking antecedent basis, and it appears that claim 6 should depend on claim 4 instead of claim 3.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

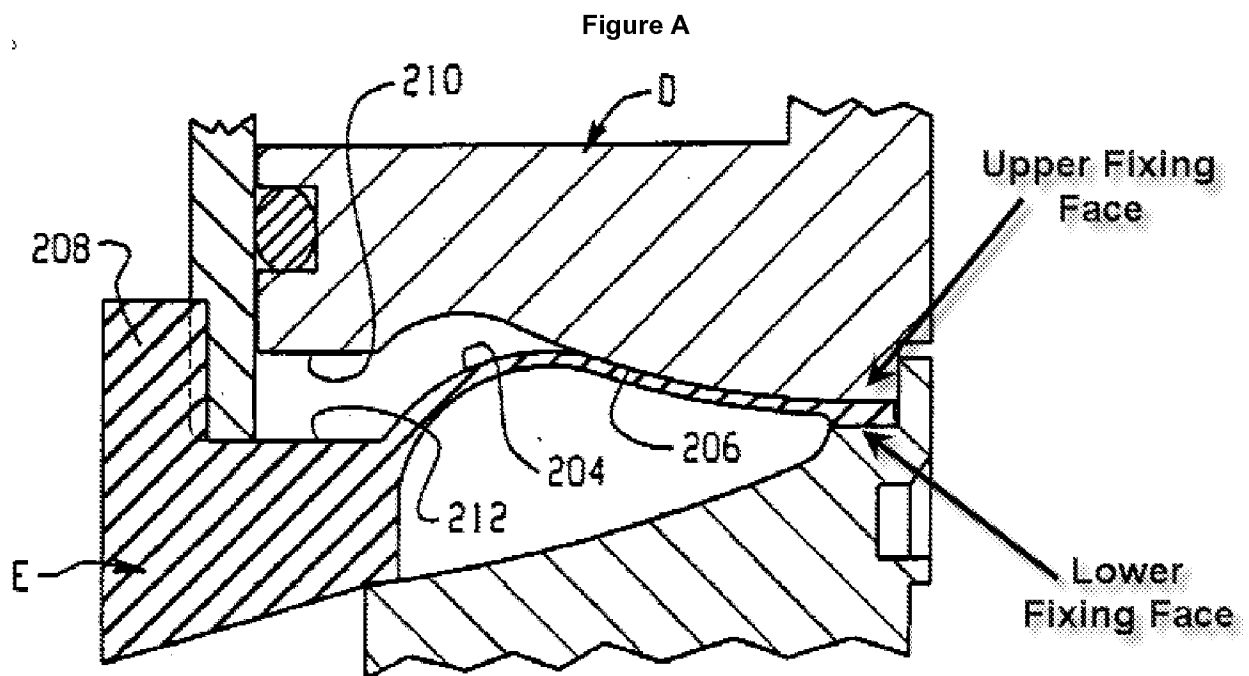
3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Browne et al. (US Patent No. 6,394,417).

Regarding Claim 1, Brown et al. discloses a diaphragm valve A (Fig. 1a) comprising: a body F (Fig. 1a) having an upper opening G (Fig. 1a); a first flow passage M (Fig. 1a) and a second flow passage L (Fig. 1a) formed in the body F to open into the upper opening G; a diaphragm valve element E (Fig. 1a) covering the upper opening G to form an airtight space through which the first M and second L flow passages are allowed to communicate with each other; a valve seat H (Fig. 1a) formed in the body F; an urging member C (Fig. 1a, col. 3, lines 14-16) urging the diaphragm valve element E against the valve seat H into a valve-closed state (Fig. 1b); and an actuator B (col. 3, lines 44-47) adapted to bring the diaphragm valve element E out of contact with the valve seat H into a valve-opened state (Fig. 1a); wherein the diaphragm valve element E comprising: a main body 22 (Fig. 2b) which is to be brought into/out of contact with

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the valve seat H (Fig. 1a); a diaphragm part 16 (Fig. 2b) formed extending in a curve, radially from the main body 22 and including a root 212 (Fig. 9c) connected to the main body 22 and positioned inside the diameter of the valve seat H; and a fixed part 28 (Fig. 2b) formed at an outer peripheral edge 14 (Fig. 2b) of the diaphragm part 16 and held at a position higher than the root during the valve-closed state (Fig. 9c).

Regarding Claim 2, Brown et al. discloses the diaphragm valve element E (Fig. 9c) in which the diaphragm part 16 (Fig. 2b) having a thin wall (col. 4, lines 33-34, 39-42) and the fixed part 28 (Fig. 2b) having a thick wall are formed so that respective upper surfaces are flush with each other (Fig. 9c), and the fixed part 28 is held between an a lower fixing face (see Fig. A below) and an upper fixing face (see Fig. A below) which extends to the diaphragm part 16.



Regarding Claim 3, Brown et al. discloses a guide face 202 (Fig. 9b) having a slope contiguous from the upper fixing face (see Fig. A above) above the diaphragm part 16 (Fig. 2b) so that the diaphragm part 16 comes into contact with the guide face 202 when the diaphragm valve element E (Fig. 9b) is separated from the valve seat H (Fig. 1a).

Regarding Claims 4-6, as best understood, Brown et al. discloses a fluid-pressure-receiving area 24 (Fig. 2b) of the valve body part 208 (Fig. 9b) is as large as or larger than a fluid-pressure-applied area of the diaphragm part (col. 8, line 54-65).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARINA TIETJEN whose telephone number is (571) 270-5422. The examiner can normally be reached on Mon-Thurs, 8:00AM-4:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quang D. Thanh can be reached on (571) 272-4982. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang D. Thanh/
Supervisory Patent Examiner,
Art Unit 4177

/M. T./
Examiner, Art Unit 4177